

WHAT IS CLAIMED IS:

1. An expandable cage for an embolic filtering device used to capture embolic debris in a body vessel, the cage comprising:

a circumferential member adapted to move between an unexpanded position and an expanded position, the circumferential member including a first bending region and a second bending region formed therein;

a proximal strut attached to the circumferential member at the first bending region; and

a distal strut attached to the circumferential member at the second bending region.

2. The cage of claim 1, wherein the expandable cage is adapted to be rotatably mounted on an elongated member.

3. The cage of claim 1, wherein the circumferential member is made from a self-expanding material.

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4. The cage of claim 1, wherein the circumferential member has a substantially oval shape when placed in the expanded position.

5. The cage of claim 1, wherein the proximal strut has a free end which is mountable to an elongated member.

6. The cage of claim 5, wherein the distal strut has a free end which is connectable to an obturator.

7. The cage of claim 6, wherein the proximal strut and the distal strut are formed as one piece with the circumferential member.

8. The cage of claim 1, wherein the proximal strut is fixedly attached to the elongated member.

9. An expandable cage for an embolic filtering device used to

capture embolic debris in a body vessel, the cage comprising a proximal circumferential member adapted to move between an unexpanded position and an expanded position, the proximal circumferential member including a plurality of bending regions formed therein;

a distal circumferential member adapted to move between a collapsed position and an expanded position, the distal circumferential member including a plurality of bending regions formed therein, the proximal circumferential member being connected to the distal circumferential member;

a plurality of proximal struts, each proximal strut being attached to the proximal circumferential member at a bending region; and

a plurality of distal struts, each distal strut being attached to the distal circumferential member at a bending region.

10. The cage of claim 9, wherein four proximal struts and four distal struts are attached to the proximal and distal circumferential members.

11. The cage of claim 10, wherein the proximal and distal circumferential members are attached to each other by at least one connecting strut.

12. The cage of claim 11, further including a plurality of connecting struts connecting the proximal and distal circumferential members.

13. The cage of claim 12, wherein the connecting strut is attached at bending regions of the proximal and distal circumferential members.

14. The cage of claim 12, wherein each connecting strut is attached at bending region located on the proximal and distal circumferential members.

15. The cage of claim 11, wherein the connecting strut is made from a different material than the proximal strut and distal strut.

16. The cage of claim 12, wherein each connecting strut is independently capable of expanding or contracting when subjected to a certain amount of force.

17. The cage of claim 9, wherein three proximal struts and three distal struts are attached to the proximal and distal circumferential members.

18. The cage of claim 17, wherein the proximal and distal circumferential members are attached to each other by at least one connecting strut.

19. The cage of claim 17, further including a plurality of connecting struts connecting the proximal and distal circumferential members.

20. The cage of claim 17, wherein the connecting strut is attached at bending regions of the proximal and distal circumferential members.

21. The cage of claim 11, wherein the connecting strut has an S-shape.

22. An embolic filtering device used to capture embolic debris in a

body vessel, comprising a filter assembly including a wire forming an expandable cage adapted to move between an unexpanded position and an expanded position and a filter element attached to the expandable cage, the cage forming an structure capable of opening the filter element and maintaining the filter element open until the cage is placed in the unexpanded position; and

a delivery system attached to the expandable cage for delivering the filter member in the body vessel, the delivery assembly including an elongated member having a distal end and a proximal end, the expandable cage being mounted near the distal end of the elongated member and movable between the unexpanded and expanded positions through rotation of the elongated member.

23. The filtering device of claim 22, wherein the cage forms a helical shape when placed in the expanded position.

24. The filtering device of claim 23, wherein the elongated member is a steerable guide wire.

25. The filtering device of claim 22, wherein the delivery system

includes a second elongated member having a proximal and distal end, the distal end being attached to one end of the wire forming the expandable cage.

26. The filtering device of claim 25, wherein the second elongated extends co-axially over the first elongated member.

27. The filtering device of claim 26, wherein the second elongated member is a tubular member.

28. The filtering device of claim 25, wherein the expandable cage is movable between its expanded and unexpanded positions through relative longitudinal movement between the first elongated member and second elongated member.

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